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EXAMINER

LEUNG, JENNIFER A

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/191,702

Applicant(s)

O'HAM, JEFFREY K.

Examiner

Jennifer A. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,8,11,12,14,15,17-19,36,38 and 40-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,8,11,12,14,15,17-19,36,38 and 40-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment submitted on September 7, 2005 has been received and carefully considered. Claims 3-6, 9, 10, 13, 16, 20-35, 37 and 39 are cancelled. Claims 1, 2, 7, 8, 11, 12, 14, 15, 17-19, 36, 38 and 40-45 remain active.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 2, 7, 8, 11, 12, 14, 15, 17-19, 36, 38 and 40-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1 and 40, it is unclear as to where the newly added limitation of, "one or more removable trays that are vertically stackable and adapted to be laterally inserted in said frame" (claim 1, lines 4-5; claim 40, lines 10-11) finds support in the specification or drawings. The specification does not state that the trays may be stacked, and FIG. 1 merely shows the one or more removable trays 38 resting side by side in the frame.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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3. Claims 1, 2, 7, 8, 14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Derr (US 1,869,844) in view of Nelson et al. (US 5,325,795).

Regarding claims 1, 17 and 18 Derr (FIG. 1-4) discloses an apparatus comprising:

- (i) a vessel comprising a permanently mounted frame (i.e., combustion chamber **2**, built up of refractory and insulating brick **3/3a** and **4**, respectively) adapted to receive one or more removable trays (i.e., baskets **14**; three baskets shown in FIG. 1; page 3, lines 1-18);
- (ii) trays **14** adapted to be laterally inserted in frame **3/3a/4** (i.e., through an opening closed by door **10**; FIG. 3); said trays comprising a bottom part and peripheral sidewalls (i.e., basket **14** is formed from sheet metal sides and ends, suitably reinforced, and its bottom suitably consists of a sheet **15** of expanded metal carried on transverse supporting members **16**), said bottom part and peripheral sidewalls having a unitary construction (see FIG. 3), and said bottom part **15** being structured so as to define orifices in said bottom (i.e., defined by expanded metal; see FIG. 2);
- (iii) a manifold for removal of gases, positioned on top of said vessel (i.e., valve **23** to branches **24, 25**, communicating via upper hood member **6**; page 3, lines 31-42); said manifold pulling air through the orifices in the bottom part **15** and into said manifold (i.e., air supplied below trays **14** via headers **20** and **20a**; page 3, lines 15-42; also, page 2, lines 48-60); and
- (iv) a heater (i.e., comprising burners **13**), said heater being positioned in a manner to allow heat to enter the vessel **3/4** at a position below said one or more removable trays **14** when inserted into said frame (see FIG. 1; page 2, lines 125-130).

Derr further discloses that for a given application, the matrices (e.g., foil scrap) may be packed into each tray **14** with a density of 0.75 to 1.25 pounds per cubic foot, and a depth of about two to three feet (page 2, lines 80-85; page 3, lines 114-128). Derr, however, is silent as to

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the one or more removable trays **14** having a loading capacity of, specifically, at least 2.5 cubic yards. In any event, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to select a loading capacity of at least 2.5 cubic yards for the trays **14** in the apparatus of Derr, on the basis of suitability for the intended use and absent showing any unexpected results thereof, because changes in size merely involves ordinary skill in the art, *In re Rose*, 220 F.2d 459, 463, 105 USPQ 237, 240 (CCPA 1955), and where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Additionally, it is well known in the art to configure a tray to a size that will allow for sufficient capacity while enabling the tray to be easily transported, as evidenced by Nelson et al. (see column 32, lines 1-9).

In view of the newly added limitations, Applicants recite, “one or more removable trays that are vertically stackable.” The modified apparatus of Derr structurally meets this limitation, because the trays are inherently capable of being vertically stacked. Using an analogy to open-topped, rectangularly shaped shoe boxes, the trays **14** in the modified apparatus of Derr would be vertically stackable much like shoe boxes are vertically stackable-- e.g., with the bottom surface of a first shoe box resting on the upper edges of the sidewalls of a second shoe box to define a stack. Additionally, the trays **14**, like shoe-boxes, could be stacked by resting any given sidewall or bottom part of a first tray on top of any given sidewall or bottom part of a second tray. Please note that the claims do not recite that the “stack” is to be laterally inserted into the frame.

Regarding claim 2, Derr further discloses a means for generating a vacuum (i.e., blower **31**; page 3, lines 59-91 FIG. 4) being connected to the manifold **23/24/25**.

Regarding claims 7 and 8, Derr further discloses the bottom part (i.e., the sheet **15** of

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expanded metal) comprises a screen and is slotted (see FIG. 2).

Regarding claim 14, Derr further discloses the manifold comprising a heat resistance gasket touching the vessel (i.e., an asbestos rope packing 12, sealing medium in groove 9; page 2, lines 103-124; FIG. 2, 3).

4. Claims 1, 2, 7, 8, 11, 14, 17-19, 36 and 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al. (DE 196 08 002) in view of Nelson et al. (US 5,325,795).

Regarding claims 1, 7, 8, 17 and 36, Franz et al. discloses an apparatus comprising:

- (i) a vessel (FIG. 1) comprising a frame (i.e., support frame 5, having L-shaped carriers 6; FIG. 1, 16) adapted to receive one or more removable trays (i.e., chamber module 2, wherein "... flanges (31) exhibit solvable elements (32) for connecting the heating module (1) with the chamber module (2)," see FIG. 1, 2, 7; column 5, sixth paragraph);
- (ii) the trays 2 adapted to be inserted in frame 5/6 and comprising a bottom part (i.e., including soil carrier 13; FIG. 1, 15) and peripheral sidewalls (i.e., chamber walls 17; FIG. 1), the bottom part supporting matrices (i.e., bulk material 44) and being structured so as to define orifices in said bottom (i.e., discharge openings 14, in the form of "perforated plates or lattice props", essentially defining a screen or slotted base, FIG. 1; column 5, second paragraph);
- (iii) a manifold (i.e., module 4 located at a side of the vessel, having a gas departure opening 46 for delivering gas from gas collecting area 45 to the module 4; FIG. 1, 5); the manifold being configured to pull air through the orifices in the bottom part of the one or more trays and into said manifold (i.e., air from line 55; FIG. 5); and
- (iv) a heater (i.e., heating module 1; FIG. 1, 2) positioned in a manner to allow heat to enter the vessel at a position below tray 2 when inserted in said frame 5/6 (see also FIG. 5).

Franz et al. discloses that for the vessel, “The dimensioning is in such a manner selected that a transport with a truck is possible.” (column 4, last paragraph). Franz et al., however, is silent as to the dimensioning of tray **2** such that it comprises a loading capacity of at least about 2.5 cubic yards for holding bulk material **44**. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to select a loading capacity of at least about 2.5 cubic yards for the tray in the apparatus of Franz et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because changes in size merely involves ordinary skill in the art, and a tray having a loading capacity of at least about 2.5 cubic yards would have allowed for sufficient capacity while being easily transported with a truck, as evidenced by Nelson et al. (see column 32, lines 1-9).

Additionally, Franz et al. is silent as to the manifold **46/4** being positioned on top of the vessel. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to select another suitable position for the manifold **46/4** (i.e., such as the recited location at the top of the vessel) in the apparatus of Franz et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because the shifting of the location of parts merely involves ordinary skill in the art. Nelson et al. (see column 33, lines 49-57; FIG. 25 and 28) evidences the conventionality of providing a manifold (i.e., removable lid **470** having vapor outlet piping **526, 466**) that is positioned on top of the vessel (i.e., container **464**), such that the vapor contaminants that are generated by the matrices can be removed along the entire length of the vessel, in the vapor space above the matrices.

Franz et al. is silent as to the bottom part **13** and the peripheral sidewalls **17** having a unitary construction (see FIG. 15). The tray of Franz et al. requires emptying of matrices from

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the top of the tray after each treatment and moving the treated matrices to another location before a new batch of matrices could be loaded into the tray. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the tray in the apparatus of Franz et al. to comprise a unitary construction, on the basis of suitability for the intended use, because it has been held that making elements integral involves ordinary skill in the art. *Nerwin v. Erlichman* 168 USPQ 177 (PO BdPatApp 1969); *In re Wolfe* 116 USPQ 443 (CCPQ 1958); *In re Howard* 150 US 164 (USSC 1893); *In re Larson* 144 USPQ 347 (CCPA 1965). Furthermore, Nelson et al. teaches that by making the bottom part and the peripheral sidewalls of a tray (i.e., a container 464; FIG. 24) as a unitary construction, small volumes of excavated, contaminated material can be readily treated and moved from location to location in a contained manner (see column 31, line 32 to column 32, line 27).

In view of the newly added limitations, Applicants recite, “one or more removable trays that are vertically stackable.” The modified apparatus of Franz et al. structurally meets this limitation, because the trays are inherently capable of being vertically stacked. Using an analogy to open-topped, rectangularly shaped shoe boxes, the trays in the modified apparatus of Franz et al. would be vertically stackable much like shoe boxes are vertically stackable-- e.g., with the bottom surface of a first shoe box resting on the upper edges of the sidewalls of a second shoe box to define a stack. Additionally, the trays, like shoe-boxes, could be stacked by resting any given sidewall or bottom part of a first tray on top of any given sidewall or bottom part of a second tray. Please note that the claims do not recite that the “stack” is to be laterally inserted into the frame. Additionally, the modified tray of Franz et al. would inherently be adapted for lateral insertion in said frame, by merely sliding the unitary tray onto the frame.

Regarding claim 2, Franz et al. discloses means for generating a vacuum (i.e., via vapor pump **49** with engine **50**) for withdrawal of the gases through the manifold **45/46/4**, said means being connected to the manifold (see FIG. 5).

Regarding claim 11, Franz et al. discloses, “The dimensioning is in such a manner selected that a transport with a truck is possible,” and “For making a handling possible with usual load devices of container vehicles a coupling rod between the carriers (6)(8) extends beyond that,” (column 4, last paragraph). However, Franz et al. is silent as to the tray **2** comprising forklift pockets. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide fork-lift pockets to the tray **2** in the apparatus of Franz et al., because the provision of fork-lift pockets to containers for enabling the disclosed transportation of the device using usual loading devices is well known in the art.

Regarding claim 14, as modified by Nelson, the manifold of Franz inherently comprises a heat resistant gasket (i.e., check seal **84**, of high grade steel fabric **78**; see FIG. 8, 9).

Regarding claim 18, although Franz et al. is silent as to the apparatus being permanently mounted, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the apparatus of Franz et al. to remain in a single location permanently, on the basis of suitability for the intended use and absent showing any unexpected results thereof, because the examiner takes Official Notice that permanently mounting a once portable apparatus would merely involve ordinary skill in the art. (e.g., in cases where the material to be treated by the apparatus is located in a single location).

Regarding claim 19, because each of the tray (i.e., container module **2**), the manifold (i.e., the standard module **4**) and the heater (i.e., heating module **1**) are modular and removable, each

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from the other, the manifold is inherently not attached to the vessel when the modular components are separated.

Regarding claims 40, 42 and 45, Franz et al. (Figures; machine translation) discloses an apparatus comprising:

- (i) a vessel having,
 - (a) a heater base (i.e., heating module 1; FIG. 1, 2), said heater base 1 including one or more tray receptacles (i.e., support frame 5, having L-shaped carriers 6 for receiving a tray or chamber module 2; FIG. 1, 16);
 - (b) a multiplicity of heaters or heat emitter tubes (i.e., heat radiating jacket pipe 33, with pipe segments 40; FIG. 2-4) mounted in said heater base 1; and
- (ii) a manifold (i.e., module 4, with opening 46 for delivering gas from collecting area 45 to the module 4; FIG. 1, 5); the manifold being configured to pull air through the orifices in the bottom part of the one or more trays and into said manifold (i.e., air from line 55; FIG. 5); and
- (iii) one or more removable trays (i.e., chamber module 2, wherein "... flanges (31) exhibit solvable elements (32) for connecting the heating module (1) with the chamber module (2)," see FIG. 1, 2, 7; column 5, sixth paragraph) adapted for insertion in said tray receptacle 5/6 above said multiplicity of heaters 33/40, said tray 2 having,
 - (a) a bottom part (i.e., including soil carrier 13; FIG. 1, 15), said bottom part capable of supporting said matrices 44 and structured so that the orifices are defined in the bottom part (i.e., discharge openings 14, in the form of "perforated plates or lattice props", essentially a screen; FIG. 1; column 5, second paragraph); and
 - (b) peripheral sidewalls (i.e., walls 17; FIG. 1) extending from the bottom part;

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wherein, upon insertion of tray 2 in said tray receptacle 5/6, peripheral sidewalls 17 of said one or more removable trays 2 effectively form the sides of said vessel (see FIG. 1).

Franz et al., however, is silent as to the manifold 46/4 being positioned over the heater base 1. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to select another suitable position for the manifold 46/4 (i.e., such as the recited location over the heater base) in the apparatus of Franz et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because the shifting of the location of parts merely involves ordinary skill in the art. Nelson et al. (see column 33, lines 49-57; FIG. 25 and 28) evidences the conventionality of providing a manifold (i.e., removable lid 470 having vapor outlet piping 526, 466) that is positioned on top of the vessel (i.e., container 464), such that the vapor contaminants that are generated by the matrices can be removed along the entire length of the vessel, in the vapor space above the matrices.

Franz et al. is silent as to the bottom part 13 and the peripheral sidewalls 17 having a unitary construction (see FIG. 15). The tray of Franz et al. requires emptying of matrices from the top of the tray after each treatment and moving the treated matrices to another location before a new batch of matrices could be loaded into the tray. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the tray in the apparatus of Franz et al. to comprise a unitary construction, on the basis of suitability for the intended use, because it has been held that making elements integral involves ordinary skill in the art. *Nerwin v. Erlichman* 168 USPQ 177 (PO BdPatApp 1969); *In re Wolfe* 116 USPQ 443 (CCPQ 1958); *In re Howard* 150 US 164 (USSC 1893); *In re Larson* 144 USPQ 347 (CCPA 1965). Furthermore, Nelson et al. teaches that by making the bottom part and the

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peripheral sidewalls of a tray (i.e., a container **464**; FIG. 24) as a unitary construction, small volumes of excavated, contaminated material can be readily treated and moved from location to location in a contained manner (see column 31, line 32 to column 32, line 27).

In view of the newly added limitations, Applicants recite, “one or more removable trays that are vertically stackable.” The modified apparatus of Franz et al. structurally meets this limitation, because the trays are inherently capable of being vertically stacked. Using an analogy to open-topped, rectangularly shaped shoe boxes, the trays in the modified apparatus of Franz et al. would be vertically stackable much like shoe boxes are vertically stackable-- e.g., with the bottom surface of a first shoe box resting on the upper edges of the sidewalls of a second shoe box to define a stack. Additionally, the trays, like shoe-boxes, could be stacked by resting any given sidewall or bottom part of a first tray on top of any given sidewall or bottom part of a second tray. Please note that the claims do not recite that the “stack” is to be laterally inserted into the frame. Additionally, the modified tray of Franz et al. would inherently be adapted for lateral insertion in said frame, by merely sliding the unitary tray onto the frame.

Regarding claim 41, Franz et al. discloses means for generating a vacuum (i.e., via vapor pump **49** with engine **50**) for withdrawal of the gases through the manifold **46/4**, said means being connected to the manifold (see FIG. 5).

Regarding claim 43, Franz et al. discloses that for the vessel, “The dimensioning is in such a manner selected that a transport with a truck is possible.” (column 4, last paragraph). Franz et al., however, is silent as to the dimensioning of tray **2** such that it comprised a loading capacity of about 2.5 cubic yards for bulk material **44**. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to select the recited loading

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capacity for the tray 2 in the apparatus of Franz et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because changes in size merely involves ordinary skill in the art, and a tray having a loading capacity of about 2.5 cubic yards would have been easily transported with a truck, as evidenced by Nelson et al. (see column 32, lines 1-9).

Regarding claim 44, Franz et al. discloses, "The dimensioning is in such a manner selected that a transport with a truck is possible," and "For making a handling possible with usual load devices of container vehicles a coupling rod between the carriers (6)(8) extends beyond that," (column 4, last paragraph). However, Franz et al. is silent as to the tray 2 comprising forklift pockets. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide fork-lift pockets to the tray 2 in the apparatus of Franz et al., because the provision of fork-lift pockets to containers for enabling the disclosed transportation of the device using usual loading devices is well known in the art.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al. (DE 196 08 002) in view of Nelson et al. (US 5,325,795), as applied to claim 1 above, and in further view of Sewell et al. (US 682,118).

Franz et al. is silent as to a means for mechanically agitating the matrices, positioned in the interior and connected to the vessel. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a mechanical agitating means to the vessel of Franz et al., on the basis of suitability for the intended use, since it is well known in the art that agitation during heating facilitates the vaporization of contaminants present in the matrices, as evidenced by Sewell et al. In particular, Sewell et al. teaches an apparatus for the destructive distillation of contaminants present in garbage, i.e., soil, wherein the apparatus

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comprises receptacles **A**, each having a grate-bottom **D** and a stirrer-shaft **E** with arms **E'**, whereby the garbage may be agitated during the distillation (page 1, lines 16-25, 46-76).

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al. (DE 196 08 002) in view of Nelson et al. (US 5,325,795), as applied to claim 1 above, and in further view of Schultz et al. (US 4,924,785).

Franz et al. discloses it is undesirable to release contaminants into the atmosphere, and therefore destroys the vaporized contaminants from the matrices **44** via burning with flame **37** in flame tube **38** (FIG. 4; column 10, lines 64-63). Franz et al., however, is silent as to the manifold comprising a 1 to 100 micron dry filter. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a 1 to 100 micron dry filter to the apparatus of Franz et al., on the basis of suitability for the intended use (i.e., for recovering particulates inherently entrained in the vaporized contaminants prior to exhaust) and absent showing any unexpected results thereof, because the provision of a filter to prevent the discharge of particulates into the environment is conventionally known in the art. Schultz et al. evidences conventionality by teaching an apparatus for pyrolyzing waste material, wherein the manifold (i.e., exhaust headers **82**, **120**; FIG. 5) connected to the top of the heated vessel having removable trays (i.e., baskets **50**; FIG. 5, 6; column 13, lines 3-17) further comprises a conventional scrubber or filter **121** (column 17, lines 55-61), to collect any volatiles present in the exhaust. Although a 1-100 micron dry filter is not expressly taught, the use of such commercially available filters (i.e., high-efficiency, or HEPA filters) is well known.

7. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al. (DE 196 08 002) in view of Nelson et al. (US 5,325,795), as applied to claim 1 above, and in further

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view of Nora et al. (EP 0 695 214).

Franz et al. discloses the lid **20** (i.e., containing the manifold portion, as modified by Nelson et al. above) comprises a plurality of means (i.e., lifting eyes **65**) for lifting of the lid **20**, and hence the manifold, from the removable tray **2**. Although Franz et al. is silent as whether the means for lifting **65** may instead comprise a hydraulic cylinder positioned under the manifold, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to substitute other known, equivalent means for facilitating lifting of the manifold portion from the vessel/tray in the modified apparatus of Franz et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because the substitution of known equivalent structures involves only ordinary skill in the art. To evidence the conventionality of such lifting means, Nora et al. teaches an apparatus comprising a basket **C** having a casing **1** and cover **10**, wherein casing **1** and cover **10** are detachable from basket **C** by manner of a lifting means, preferably comprising pneumatic cylinders **12** (FIG. 5, 6, 7).

Response to Arguments

8. Applicant's arguments filed September 7, 2005 have been fully considered but they are not persuasive.

Arguments regarding the prior art of Derr in view of Nelson et al.

On page 6, middle of the page, Applicant argues,

“Derr discloses that a plurality of the entire gas tight retorts **1**, not the removable trays as recited in claim 1, can be used in a single apparatus. Further, Derr does not teach that the retorts **1** are even vertically stackable, since, as seen in Figure 1, one retort **1** appears to be hanging above the other without any means for staking the two. Additionally, the retort **1** which contains the basket **14** in Derr is gas tight. Specifically, Derr is concerned

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with maintaining a low oxygen atmosphere to avoid carbon residue. Accordingly, Derr discloses maintaining a low oxygen atmosphere. In fact, Derr is silent regarding pulling air from under a tray and into the manifold as recited in claim 1... Although Derr discloses a blower 31, the blower 31 is for recirculation to control the amount of air in the retort 1, not to pull air from under a tray.”

The Examiner respectfully disagrees. Firstly, Applicant argues that the apparatus of Derr comprises a plurality of the entire gas tight retorts 1, and not a plurality of removable trays 14 as required in claim 1. However, please note that claim 1 recites, “a vessel comprising a frame adapted to receive *one or more* removable trays.” (line 3). An apparatus comprising only one tray would therefore meet the claim. Additionally, it is noted that the frame need only be “adapted to” receive one or more removable trays. Thus, for the sake of argument, an apparatus comprising no trays would also meet the claim, as long as the frame was structurally capable of receiving trays. It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Secondly, Applicant argues that Derr does not teach retorts 1 that are vertically stackable. As cited in the rejection above, the trays comprise the baskets 14, and not the retorts 1, and therefore the Examiner will address the argument as it relates to trays/baskets 14. As recited in claim 1, the “one or more removable trays ... are vertically stackable and adapted to be laterally inserted in said frame.” (lines 4-5). In the rejection above, the Examiner has demonstrated how the baskets 14 would be vertically stackable, with an analogy to a stack of shoe boxes.

Lastly, Applicant argues that the retort 1 is gas-tight to maintain a low oxygen atmosphere, and therefore the blower 31 is merely provided for recirculation of air in the retort 1

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to control the amount of air in the retort, and not to pull air from under the tray 14. The Examiner respectfully disagrees. Please note that Derr discloses that during a “second stage” of operation, residual carbonaceous matter remaining from a first stage of operation is removed by continuing the heating while *admitting air, or other oxidizing or oxygen containing gas*. (see page 2, lines 12-26, and lines 48-80). As can be seen from FIG. 3, the air is supplied below each tray 14 via a manifold system comprising headers 20 and 20a connected to a gas supply line 21. (page 3, lines 19-30). In addition, Derr states that, “The most satisfactory results are had by circulating the gas uniformly *through the mass* in the second stage.” (page 2, lines 71-73). Also, the “... construction [of the baskets 14] directs gas supplied below the basket *upwardly through its contents* in a manner productive of the best results.” (page 3, lines 16-29).

Arguments regarding the prior art of Franz et al. in view of Nelson et al.

On page 7, middle of the page, Applicant argues,

“...Franz discloses a device for soil isolation that includes a chamber module 2 with a cover 3 that are configured to be gas tight... the device also includes a carrying module 13 that is integral with a heating module 1. Given the configuration required by Franz, it is apparent that the modules 2 are not configured to be vertically stacked or laterally inserted into the frame... since Franz requires a gas tight configuration to maintain the pressure of the chamber, Franz does not teach or suggest, pulling air through orifices in a bottom of the one or more trays and into the manifold... Since the device in Franz is gas tight, Franz actually teaches away from pulling air through orifices in a bottom of the one or more trays and into the manifold... Although Franz discloses a vapor pump 49, the pump is for withdrawing water vapor from the collected gas, not for pulling air through the orifices in the bottom of the tray.”

The Examiner respectfully disagrees. Firstly, Applicant argues that the configuration of the

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apparatus with a carrying module **13** that is integral with the heating module **1** does not allow for the chamber module **2** (i.e., the tray) to be vertically stacked and laterally inserted. However, please note that claim 1 recites, “a vessel comprising a frame adapted to receive *one or more* removable trays.” (line 3). An apparatus comprising only one tray would therefore meet the claim. Additionally, it is noted that the frame need only be “adapted to” receive one or more removable trays. Thus, for the sake of argument, an apparatus comprising no trays would also meet the claim, as long as the frame was structurally capable of receiving trays. It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Secondly, Applicant argues that the manifold as disclosed by Franz et al. is not configured to pull air through the orifices at the bottom of the trays and into the manifold because the apparatus is gas tight, and therefore, the vapor pump **49** merely withdraws water vapor from the collected gas. The Examiner respectfully disagrees. As can be seen from FIG. 5, the apparatus comprises a line **55** for supplying air into the area of the gas burner **36**, located below the orifices in the bottom **13** of the tray. Thus, the vapor pump **49** will inherently draw air from the region below the tray, as introduced from line **55**, then through the contents of the tray, and finally into the manifold.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). As set forth in 37 CFR 1.136(a), a shortened statutory period for reply to this final action is set to

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expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

* * *

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Leung
December 8, 2005




HIEN TRAN
PRIMARY EXAMINER